

IN THE CLAIMS

This listing of claims replaces all prior versions, and listings, in this application.

1. (Currently Amended) A one step process for the preparation of a metal-organic compound, comprising at least one imine ligand compound, characterized in that an imine ligand compound according to formula 1 or the HA adduct thereof, wherein HA represents an acid, of which H represents its proton and A its conjugate base, is contacted with a metal- organic reagent of formula 2 in the presence of 1, respectively or 2 equivalents of a base, with

$Y=N-R$

as formula 1,

wherein Y is selected from a substituted carbon, nitrogen, or phosphorous atom and R represents a substituent, and with

$M^V(L_1)_k(L_2)_l(L_3)_m(L_4)_nX$

as formula 2,

wherein: M represents a group 4 or group 5 metal ion

V represents the valency of the metal ion, being 3, 4 or 5

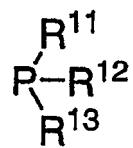
L_1 , L_2 , L_3 , and L_4 represent a ligand or a group 17 halogen atom on M and may be equal or different, at least one of the ligands L is chosen from cyclopentadienyl, C_1-C_{20} hydrocarbyl, substituted cyclopentadienyls, indenyl, C_1-C_{20} hydrocarbyl substituted indenyls, and halogen substituted C_1-C_{20} hydrocarbyl substituted indenyls

X represents a group 17-halogen atom,

k, l, m, n = 0, 1, 2, 3, 4 with $k+l+m+n+1=V$.

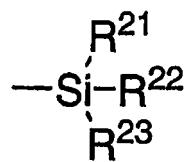
2. (Previously Presented) A process according to claim 1 wherein R represents a hydrogen atom and wherein Y is selected from the group consisting of

i) a phosphorus substituent defined by the formula:



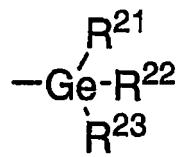
(formula 3)

wherein each R^{1j} , with $j = 1-3$ is independently selected from the group consisting of a hydrogen atom, a halogen atom, a C_{1-8} alkoxy radical, a C_{6-10} aryl or aryloxy radical, an amido radical, a C_{1-20} hydrocarbyl radical unsubstituted or substituted by a halogen atom, a C_{1-8} alkoxy radical, a C_{6-10} aryl or aryloxy radical, an amido radical, a silyl radical of the formula:



(formula 4)

and a germanyl radical of the formula:

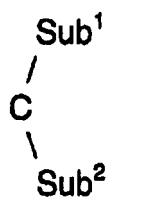


(formula 5)

wherein R^{2j} is independently selected from the group consisting of hydrogen, a C_{1-8} alkyl, a alkoxy radical, a C_{6-10} aryl and aryloxy radicals,

each substituent R^{1j} or R^{2j} may be linked with another R^1 or R^2 to form a ring system,

ii) a substituent defined by formula 6:



(formula 6)

wherein each of Sub¹ and Sub² is independently selected from the group consisting of hydrocarbyl radicals having from 1 to 30 carbon atoms; silyl radicals, amido radicals, substituted amido radicals, phosphido radicals, and substituted phosphido radicals; and

wherein Sub¹ and Sub² may be linked with each other to form a ring system.

3. (Previously Presented) A process according to claim 1, wherein the base is a dialkylamine, a trialkylamine, a monoarylamine, diarylamine or a triarylamine.

4. (Previously Presented) A process according to claim 1, wherein the base is triethylamine, pyridine, tripropylamine, tributylamine, 1, 4-diaza-bicyclo [2.2. 2] octane, pyrrolidine or piperidine.

5. (Previously Presented) A process according to claim 1, wherein the base is a carboxylate, a fluoride, a hydroxide, a cyanide, an amide, a carbonate of Li, Na, K, Rb, Cs, or an ammonium salt or a group 2 metal salt of Mg, Ca, or Ba thereof, an alkali metal phosphate, or phosphate ester, or their alkoxides or phenoxides, thallium hydroxide, alkylammonium hydroxides or fluorides, or alkali metals, hydrides or carbonates of Li, Na, K, Rb, Cs or group 2 hydrides.

6. (Original) A process according to claim 5, wherein the alkali metal is chosen from Li, Na, or K.

7. (Previously Presented) A process according to claim 1, wherein the base is a group 1, 2, 12,13 hydrocarbanion.

8. (Original) A process according to claim 7, wherein the base is an organomagnesium- or an organolithium compound.

9. (Currently Amended) A process according to claim 1, wherein said process is carried out in the presence of 3 or 4 equivalents of an organolithium- or an organomagnesium compound.

10. (Previously Presented) A process according to claim 1 wherein the reaction is carried out in an aprotic solvent.

11. (Original) A process according to claim 10, wherein the solvent is the base.

12. (Previously Presented) Process for the preparation of a polyolefin by making a metal-organic compound according to the process of claim 1, wherein the base is an olefin polymerisation compatible base, which metal-organic compound is activated anywhere in, or before a polymerisation reactor.

13. (Original) Process according to any of claims 12, wherein the metal-organic compound is formed used without purification.

14. (Previously Presented) Process according to claim 12, wherein the metal-organic compound is formed in the polymerisation equipment.

15. (Currently Amended) Process according to claim 14, wherein said process is performed in the presence of between 5 and 10 equivalents of the imine ligand compound according to formula 1.

16. (Previously Presented) A process according to claim 1, wherein said C₁-C₂₀ hydrocarbyl contains hetero- or group 17 halogen atoms.

17. (Previously Presented) A process according to claim 5, wherein said an alkali metal phosphate is selected from the group consisting of Li, Na, K, Rb, and Cs.